MID-SNAKE WATERSHED ADVISORY GROUP

Meeting Minutes

Department of Environmental Quality
650 Addison Avenue West, Suite 110, Twin Falls, Idaho
Wednesday, May 11, 2016, 2:00 p.m.

Attendees

Jay Barlogi – Twin Falls Canal Company
Jason Brown – City of Twin Falls
Sonny Buhidar – DEQ, Twin Falls Regional Office
Gary Fornshell – University of Idaho
Ryan Fosness – US Geological Survey
Brian Hoelscher – Idaho Power
Shell Howard – DEQ, Twin Falls Regional Office
Chris Mebane – US Geological Survey
Andy Morton – Clear Springs Food
Richard Parrott – Farmer
Chuck Pentzer – Soil and Water Conservation Commission
Sue Switzer – DEQ, Twin Falls Regional Office
Craig Thomas – DEQ, Twin Falls Regional Office
Mike Trabert – Chairman, Recreation
Jim Younk - Idaho Power

Welcome

The meeting of the Mid Snake Watershed Advisory Group (WAG) was called to order at a little after 2:00 p.m. by Mike Trabert, WAG Chairman. The attendees introduced themselves. It was announced that the meeting was being recorded.

WAG Business

- The minutes from the January 20, 2016 meeting were reviewed. Andy Morton made a motion that the minutes be approved as written. Jason Brown seconded, and the motion carried unanimously.

- The next WAG meeting will be August 10, 2016. Christy Meyer at the Fresh Water Trust in Boise might be a good contact for arranging a presentation concerning what's going on in Boise with the trading.

- It was suggested that DEQ present information concerning the temperature study that was done on the Cedar Draw and Mud Creek with the aquaculture facilities.

Bathymetric Mapping, Sediment Coring and Seismic Surveys

Hydro-acoustics, bathymetry, seismic reflection, coring and underwater videography were methods presented and discussed by Ryan Fosness. Sediment data has 3 major groupings; water column, riverbed and subsurface bed material.

The peak concentration doesn't necessarily correlate with the peak discharge. This is problematic because total streamflow is multiplied by discharge to get total load. But the USGS found those calculations are erroneous, because they don't necessarily line-up. USGS & others found that hydro-acoustics, ADVM (Acoustic Doppler Velocity Meter), could be used. It has 2 beams that shoot out into the river and one beam that looks up for the depth. They've found this acoustic back scatter is the best technology to have emerged in the last several years.

The acoustic doppler is mounted on a slide rail that goes into the river about half way down the water column. Circles in the graph represent the volume the doppler sends out and each one is referred to as a bin. A bin is every 15 minutes taking a sample. The sound it sends out is different from the return sound. The louder the return signal the more sediment that is in the water. When you use the acoustics you don't have to go out and sample as much throughout the year to generate sediment estimates.

High resolution bathymetry is used to find the riverbed elevation, to get what is called a swath. You have a single transducer that shoots multiple beams. Their system shoots up to 480 beams at 120 degree angle, 255 kHz. The goal is to collect one continuous swath everywhere through the river. It is essentially typography underwater cylinder LiDAR. Ryan showed examples of bathymetry on the Kootenai River.

The seismic aim at defining thickness of the sediment layer. Ryan's experience has been with chirp acoustic. It is a swept frequency, 4-24 kHz. It is a low enough frequency that it will penetrate the sediment to some confining layer. The goal is to explain sediment layers between riverbed and bedrock. Ryan showed examples of a seismic study at Brownlee.

The goal with sediment coring is to verify what you are seeing with the seismic. Generally the seismic work is done first and then you come back and core over the areas that were noted as high areas of aggradation.

Underwater video monitoring on the Kootenai was used to see how fast and how much the sediment was filling in. The product is called a sediment facies map. It tells you what you are really looking at on the bottom.

Remote sensing obtains information above the area. It could be LiDAR imagery, satellite imagery, fixed-wing aircraft, or drone. Ryan showed examples NAIP imagery (4-band imagery with red, green, blue, and infrared sequence). The goal is to highlight vegetation.

2015 Trend Monitoring Results for the Snake River

Jim Younk talked about environmental compliance monitoring on the 4 Mid Snake power plants projects: Bliss, Lower Salmon Falls, Upper Salmon Falls, and Shoshone Falls. In addition,

monitoring was done at Twin Falls in the 2015 water year. Idaho Power has been collecting temperature and dissolved oxygen data every ten minutes on these sites since early 1990s. They believed that it might be more beneficial to broaden the range of constituents to see what was really going on in the river. FERC approved the discontinuance of the 10-minute monitoring of temperature and DO and approve the implementation of broader long-term trend monitoring, collecting data every other week year round. This monitoring began in spring of 2013 at three of the sites, and the other two sites began in fall 2014. Jim presented some of the results of the monitoring data.

When examining the data for QA, guidance curves are used. When something is plotted outside of the guidance curve and looks suspicious, it is examined to see if the data point can be validated. Six times a year duplicates and spike samples are done. Anything below 20% is considered acceptable. Relative range is not calculated unless the result is at least 5 times greater than the detection limit.

There was a change this year in the laboratory used for chlorophyll analysis. From January to July, for 15 sampling events, samples were taken to both Analytical and USBR laboratories. Analyzing the percent of relative range for precision of tests, USBR lab had lower relative range with much lower variance. Therefore, the switch was made to USBR Lab after July 2015.

This was the third year, second full year, of this nutrient trend monitoring. In two more years a trend report will be written. The data will be available for other interested parties and stakeholders in the Snake who can benefit from them.

DEQ Updates

- Water Quality Trading Guidance public comment period closes in June. The document out at the time it was brought up at the last WAG meeting was dated July 2010. The document out for public comment is dated March 2016. They are vastly different in appearance, but the content is not that much different. WAG members were encouraged to bring up the new document and review it.

- Draft NPDES permit to control discharges from pesticides is out for public comment. Comment period closed May 9.

- WBAG III is in public comment, closes May 23. There are some minor updated to the matrix for the BURP data.

- The next meeting for IPDES will be May 23.

- The Water Quality – Use Attainability Analysis final rule became effective on March 25. DEQ is working on guidance for that. It is supposed to be done the end of this year.

- Sue responded to a comment from Andy Morton at a previous meeting about some language in the 2012 Integrated Report referencing a nutrient study DEQ was doing. Jason Pappani said it was referencing "N steps." Sue was previously told that the study
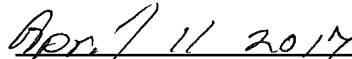
would be used in developing number criteria for nutrients, emphatically not. Rather they are looking at quantitative ways of looking at the narrative nutrient criteria.

Adjourn

Following a motion and second, the meeting was adjourned by Mike Trabert at approximately 3:55 p.m.

_____   April 11 2017
WAG Chairman   Approval Date